

CLAIMS

I claim:

1. A pack off system and apparatus that uses only air or gasses which are pressurized and systematically directed to operate & drive an annulus pack off head/s mechanisms to squeeze pliable material/s that create and manipulate variable and adjustable seal/s, or

 said pack off head/s that receive pressurized and directed air or gasses as agents for driving the operation of said pack off mechanisms has the capability for separate utilization of hydraulic pressure application as the agent directed and driven for the operation of same or separate mechanisms within the same pack off head/s chamber annulus &/or simultaneous or separate utilization of hydraulic pressure application as the agent for driving the operation of separate pack off head/s mechanisms for separate pack off chamber annulus within the same pack off system, wherein;

 said pack off head/s are attachable and/or attached to pipes and/or system of apparatus and pipes used for conveying petroleum or petroleum byproducts or natural gasses or natural gas byproducts and,

 said pliable material/s has/have a passage through which a string or length of material has access to pass and/or move through into said pipes or system of apparatus and pipes or out of said pipes or system of apparatus and pipes and,

 said pressure agents that are directed and drive said pack off head/s mechanisms are derived &/or applied from outside of said pipes or system of apparatus and pipes, wherein;

 said pliant seal material/s form seal/s within said pack off head/s apparatus &/or said pipes or system of apparatus and pipes annulus wall/s and against the

string or length of material that passes through it such that said seal varies according to the amount of pressure directed and applied.

2. A pack off system and apparatus according to claim 1 wherein said string or length of material that passes through said variable seal materials are used for a procedure, operation or job that involves the movement of tools or apparatus within or in and/or out of an oil or gas well or a water well.
3. A pack off system and apparatus according to claim 1 wherein said string or length of material that passes through said variable seal materials are used for a procedure, operation or job that involves the movement of tools or apparatus within or in and/or out of system or set of pipes, attached to a further apparatus and/or set of pipes that tap into &/or control the flow of or are directed to tap into &/or control the flow of natural or manmade resources.
4. A pack off head/s apparatus according to claim 1 wherein said pack off head/s are tooled or molded to receive fittings or to be fit to further apparatus.
5. A pack off head/s apparatus according to claim 4 wherein said fitting/s received or further apparatus fit to, have/has a sensory and processing means to detect and analyze emissions.
6. A pack off head/s apparatus according to claim 4 wherein said fitting/s received or further apparatus fit to, have/has a means to capture emissions.
7. A pack off system and apparatus according to claim 1 wherein said pack off head/s that receive/s said air or gasses or receive/s hydraulic fluid have a chamber or chambers that are hermetically sealed with the exception of a valve/s to receive or release pressure and/or pressure agents and said chamber/s respond to the application and release of said pressure acting as a piston/s for applying or releasing pressure on further parts to adjust said variable seal/s.

8. A pack off head or heads according to claim 1 wherein said pack off head or heads have a chamber or chambers that use only air or gasses and said chamber/s are hermetically sealed with the exception of a valve/s to receive or release pressure and said chamber/s respond to the application and release of said pressurized air or gasses acting as a piston/s for applying or releasing pressure on further parts to adjust said variable seal/s.
9. A pack off system & apparatus according to claim 1 wherein said pack off head/s annulus chamber/s hold/s an air bag or air bags that inflate/s and deflate/s according to the application and release of said pressurized air or gasses and said annulus chamber/s respond to the activated or released bag pressure within said annulus chamber/s acting as a piston/s applying or releasing pressure on further parts to adjust said variable seal/s.
10. A pack off system & apparatus according to claim 1 wherein said pack off head or heads have an air bag/s that inflates and deflates according to the application or release of said pressurized air or gasses and adjusts a pliable and circular material at its center to form variable seal/s around said length or string of materials passing through said variable seal material/s into or out of a system or set of pipes attached to a further apparatus and/or set of pipes that tap into &/or control the flow of or are directed to tap into &/or control the flow natural or man made resources.
11. A pack off apparatus according to claim 9 wherein pack off apparatus and chamber/s housing said air bag/s, has been tooled or molded for a means of opening and closing securely.
12. A pack off system and apparatus according to claim 1 having a means for compressing said pressure agents for said pressurized direction to create and manipulate said variable and adjustable seal, wherein said compression means is manual or mechanical or automated or any combination thereof.

13. A pack off system and apparatus according to claim 1 having means for controlling application and/or release or bleeding off of said pressure agents manually or mechanically or through automation or any combination thereof, wherein said control means may be installed and/or located at one or more points anywhere along the length of said system that directs pressure or remote of said system.
14. A pack off system & apparatus according to claim 13 wherein said control means is electronic.
15. A pack off system & apparatus according to claim 14 wherein said electronic control means has a further means for receiving and/or sending communications data for said automated &/or manual control of said application or release of pressure within said system and apparatus.
16. A pack off system and apparatus according to claim 1 having means for measuring the applied pressure of said pressure agents, wherein said measuring means may be installed and/or located at one or more points or anywhere along the length of said system that directs pressure or remote of said system.
17. A pack off system and apparatus according to claim 16 wherein said measurement means measures in units and/or increments of units of Kilopascals – KPA, and/or pounds per square inch – PSI.
18. A pack off system and apparatus according to claim 16 wherein said measurement means measures in units and/or increments that are displayed in a display device.
19. A pack off system and apparatus according to claim 16 wherein said measuring means is electronic.

20. A pack off system and apparatus according to claim 22 wherein said electronic measuring means has an electronic display for measurement data.
21. A pack off system and apparatus according to claim 16 wherein said measuring means has a further means for processing data.
22. A pack off system and apparatus according to claim 21 wherein said means for processing measurement data has further means for data storage &/or transmission.
23. A pack off system and apparatus according to claim 22 wherein said means for transmitting data processed measurements, transmits measurement data to a control means that receives the measurement data and sends control data for manual and/or automated control.
24. A pack off system & apparatus according to claim 23 wherein said means that receives data and sends control data has programmed parameters for analyzing pressure data received.
25. A pack off system & apparatus according to claim 25 wherein said data is analyzed by said programmed parameters, and said parameters or a further parameter set/s engage to provide a display of and/or transmit instructions for manual &/or automated application or release of pressure for said pack off system and apparatus.